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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/931,493

08/16/2001

Maurice W. Peterson

99CR098/KE

3675

7590

12/13/2005

Rockwell Collins, Inc.  
Attention: Kyle Eppele  
M/S 124-323  
400 Collins Rd. NE  
Cedar Rapids, IA 52498

EXAMINER

FILE, ERIN M

ART UNIT

PAPER NUMBER

2634

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action  
Before the Filing of an Appeal Brief**

Application No.

09/931,493

Applicant(s)

PETERSON ET AL.

Examiner

Erin M. File

Art Unit

2634

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 27 May 2005 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☐ The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.  
b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: \_\_\_\_\_.  
Claim(s) objected to: \_\_\_\_\_.  
Claim(s) rejected: 1-20.  
Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: the applicants arguments are not persuasive.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). \_\_\_\_\_.  
13. ☐ Other: \_\_\_\_\_.

### ADVISORY ACTION

1. In response to the applicants argument that there is no teaching or suggestion identified which would properly support a combination of the Carney reference and the Kafadar reference.

*There is no teaching or suggestion in either Carney or Kafadar to predictor a signal source as a function of the phase error estimate of the transmitter (p. 5, lines 17-19)*

In Kafadar's Background of the Invention, column 1, lines 18-32:

Demodulators for data that is transmitted with quadrature modulation, such as phase shift keyed (PSK) data, can introduce losses into the received data as a result of various conditions inherent in the demodulator. Examples of these conditions include gain imbalance in which the in-phase signal is amplified by a different amount than the quadrature signal, quadrature imbalance in which the phase difference between the two signals is not precisely 90 degrees. DC offsets in either or both of the in-phase and quadrature channels and scale errors resulting from the net effect of gains and losses in the system. Each of these potential sources of signal loss must be measured to determine calibration factors. Once determined, these factors are used to adjust the system and transform the received data into actual data.

The examiner contends that here Kafadar discloses phase error and its effects on a transmitted signal. By using a reference signal and comparing the signal to the received singal, Kafadar is creating a type of phase error estimate. Although Kafadar is here referring to the removal of distortion after a signal is received, when looked at in view of Carney, column 1, lines 56-63:

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The predistortion technique feeds back a portion of the output signal from the HPA through a radio frequency (RF) and intermediate frequency (IF) downconversion stage that uses the same IF and RF local oscillators that were used to generate the input signal to the HPA. This feedback signal from the HPA is digitized and fed to a predistortion processor together with a version of the composite digital signal generated by the broadband digital synthesizer.

Carney teaches predistortion circuitry for a cellular environment (see abstract). Kafadar teaches the use of phase error estimation of a received signal transmitted in quadrature modulation such as phase shift keyed, a type of modulation used in wireless/cellular networks. The examiner contends that there is sufficient motivation for the combination of these references.

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erin M. File whose telephone number is (571)272-6040. The examiner can normally be reached on M-F 9:30-6:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571)272-3056. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

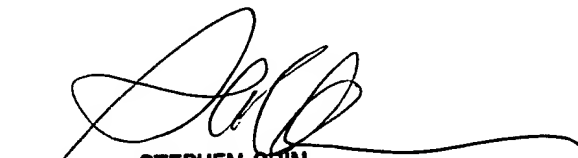
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Erin M. File



12/9/2005



**STEPHEN CHIN**  
**SUPERVISORY PATENT EXAMINE**  
**TECHNOLOGY CENTER 2600**